IN THE CLAIMS:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Currently Amended) An S-nitrosothiol derivative of penicillamine or glutathion
of formula I:

$$\begin{array}{c|c}
 & B \\
 & A \\
 & SNO \\
 & R^2 \\
 & H \\
 & O \\
\end{array}$$
(I)

or its pharmaceutically acceptable salt thereof, in which:

A and B are phenyl groups or together form the group $-CH_2$ -Q- CH_2 - constituting a six membered ring in which Q represents oxygen, sulfur, or a group N-R³, in which R³ is hydrogen or an alkyl group C_1 - C_4 ;

 R^1 is an acyl group, which may be an aliphatic C_1 - C_5 acyl group or a glutamic acid acyl group bonded via its gamma carboxyl group;

 R^2 is a hydroxyl group or a glycine group bonded via a peptide bond; with the proviso that if R^1 is an aliphatic acyl group, then R^2 is a hydroxyl group, and if R^1 is a glutamic acid acyl group, then R^2 is a glycine group.

20. (Previously Presented) The S-nitrosothiol derivative of Claim 19 having the formula:

wherein R⁴ is a C₁-C₄ alkyl group.

- 21. (Previously Presented) The S-nitrosothiol derivative of Claim 19 which is N-acetyl-2-amino-2-[4-(4-S-nitrosomercaptotetrahydropyran)] acetic acid.
- 22. (Previously Presented) The S-nitrosothiol derivative of Claim 19 which is N-acetyl-2-amino-2-[4-(4-S-nitrosomercapto-1-methylpiperidin)] acetic acid.
- 23. (Previously Presented) The S-nitrosothiol derivative of Claim 19 which is N-acetyl-2-amino-3-benzyl-3-S-nitrosomercapto-4-phenylbutanoic acid.
- 24. (Currently Amended) <u>The</u> S-nitrosothiol of Claim 19, having the following formula III:

25. (Previously Presented) The S-nitrosothiol derivative of Claim 19 which is N[N-γ-L-glutamyl-2-amino-2-(4-(4-S-nitrosomercapto) tetrahydropyran))acetyl]glycine.

- 26. (Previously Presented) The S-nitrosothiol derivative of Claim 19 which is N[N-γ-L-glutamyl-2-amino-2-(4-(4-S-nitrosomercapto-1-methylpiperidin))acetyl]glycine.
- 27. (Previously Presented) The S-nitrosothiol derivative of Claim 19 which is N[N-γ-L-glutamyl-2-amino-3-benzyl-3-(S-nitrosomercapto)-4-phenylbutanoyl]glycine.
- 28. (Currently Amended) A method for the treatment of dysfunctions a disorder of the circulatory system in a subject in need of such treatment comprising administering thereto a medicament having a platelet aggregating inhibiting- an effective amount of the S-nitrosothiol derivative of Claim 19 for treating said disorder.
- 29. (Currently Amended) A pharmaceutical composition comprising a platelet aggregating inhibiting an effective amount of the S-nitrosothiol derivatives of Claim 19 and a pharmaceutical carrier therefor.
- 30. (Previously Presented) The pharmaceutical composition according to Claim 29 wherein the S-nitrosothiol derivative has the formula

wherein R⁴ is a C₁-C₄ alkyl group.

- 31. (Previously Presented) The pharmaceutical composition according to Claim 29 which is N-acetyl-2-amino-2-[4-(4-S-nitrosomercaptotetrahydropyran)] acetic acid.
- 32. (Previously Presented) The pharmaceutical composition according to Claim 29 which is N-acetyl-2-amino-2-[4-(4-S-nitrosomercapto-1-methylpiperidin)] acetic acid.
- 33. (Previously Presented) The pharmaceutical composition according to Claim 29 which is N-acetyl-2-amino-3-benzyl-3-S-nitrosomercapto-4-phenylbutanoic acid.
- 34. (Previously Presented) The pharmaceutical composition according to Claim 29 wherein the S-nitrosothiol derivative has the formula

35. (Previously Presented) The pharmaceutical composition according to Claim 29 wherein the S-nitrosothiol derivative is N[N-γ-L-glutamyl-2-amino-2-(4-(4-S-nitrosomercapto) tetrahydropyran))acetyl]-glycine.

- 36. (Previously Presented) The pharmaceutical composition according to Claim 29 wherein the S-nitrosothiol derivative is N[N-γ-L-glutamyl-2-amino-2-(4-(4-S-nitrosomercapto-1-methylpiperidin))acetyl]glycine.
- 37. (Previously Presented) The pharmaceutical composition according to Claim 29 wherein the S-nitrosothiol derivative is N[N-γ-L-glutamyl-2-amino-3-benzyl-3-(S-nitrosomercapto)-4-phenylbutanoyl]glycine.
- 38. (New) The method according to Claim 28 wherein the S-nitrosothiol derivative has the formula:

$$\begin{array}{c|c} & & & \\ &$$

wherein R⁴ is a C₁-C₄ alkyl group.